Award Number: **W81XWH-07-1-0261**

TITLE: **California's Parkinson's Disease Registry Pilot Project – Coordination Center and Northern California Ascertainment**

PRINCIPAL INVESTIGATOR: **Caroline M. Tanner, MD, PhD.**

CONTRACTING ORGANIZATION:

The Parkinson's Institute
Sunnyvale, California 94085-2934

REPORT DATE: **March 2010**

TYPE OF REPORT: **Annual**

PREPARED FOR: U.S. Army Medical Research and Materiel Command
Fort Detrick, Maryland 21702-5012

DISTRIBUTION STATEMENT:

Approved for public release; distribution unlimited

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

1. REPORT DATE *(DD-MM-YYYY)*	2. REPORT TYPE	3. DATES COVERED *(From - To)*
01-03-2010	Annual	1 Mar 2009 - 28 Feb 2010

4. TITLE AND SUBTITLE
California's Parkinson's Disease Registry Pilot Project – Coordination Center and Northern California Ascertainment

5a. CONTRACT NUMBER

5b. GRANT NUMBER
W81XWH-07-1-0261

5c. PROGRAM ELEMENT NUMBER

6. AUTHOR(S)
Caroline M. Tanner, M.D., Ph.D.

5d. PROJECT NUMBER

5e. TASK NUMBER

5f. WORK UNIT NUMBER

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)
The Parkinson's Institute
Sunnyvale, California 94085-2934

E-Mail: ctanner@thepi.org

8. PERFORMING ORGANIZATION REPORT NUMBER

9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)
U.S. Army Medical Research and Materiel Command
Fort Detrick
Maryland 21702-5012

10. SPONSOR/MONITOR'S ACRONYM(S)

11. SPONSOR/MONITOR'S REPORT NUMBER(S)

12. DISTRIBUTION / AVAILABILITY STATEMENT
Approved for public release; distribution unlimited

13. SUPPLEMENTARY NOTES
None.

14. ABSTRACT
The primary goal of this project is to conduct a pilot study for the legally mandated population-based Parkinson's disease (PD) registry in the state of California. This study is one of two linked research programs with the goals of establishing and using California PD registry data. The Parkinson's Institute was funded to serve as the coordinating center for the pilot project (including maintaining a secure data enclave), conduct ascertainment work in Santa Clara County and explore utilization of registry data. To date, over 4,000 parkinsonism cases have been identified in Santa Clara County via legally mandated reporting sources, including physicians and health care facilities. With the majority of case-finding work accomplished, project effort is being directed to investigate possible associations between PD and toxicant exposure using state databases, to define disease prevalence and care patterns among registrants, and to assess the value of the registry to stakeholders.

15. SUBJECT TERMS
Parkinson's disease, disease registry, pilot feasibility study, toxicant exposures.

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT	b. ABSTRACT	c. THIS PAGE			19b. TELEPHONE NUMBER *(include area code)*
U	U	U	UU	11	USAMRMC

Standard Form 298 (Rev. 8-98)
Prescribed by ANSI Std. Z39.18

Table of Contents

Page No.

A. Introduction

This project consists of a pilot study conducted in partnership with the California Department of Public Health (CDPH) and the University of California-Los Angeles School of Public Health (UCLA) to implement a legally mandated statewide population-based Parkinson's disease (PD) registry in California to serve health surveillance and research aims. As the coordinating center for the surveillance activities, the Parkinson's Institute has achieved multiple milestones, including the development of data collection tools, staff training materials, a secure database, and policies and procedures for registry operations. Case ascertainment activities by the PI and UCLA have been underway in the four target counties in northern and southern California for more than one year with approximately 7,690 PD cases identified to date. As the database grows, we are working to apply systematic de-duplication procedures to ensure unique entries, validate registry content (i.e. confirmation of diagnosis and other qualifying criteria) and evaluate the quality and completeness of registry data using census, Medicare and death certificate data. Project efforts are now transitioning to assess differences in PD prevalence and patterns of care across different groups, explore possible associations between toxicant exposure and PD patterns utilizing state hazardous substances databases, determine the value of the registry to key stakeholder groups, and determine the cost of registry operation.

B. Body

The goals of this project are to conduct a feasibility study for the legally mandated California statewide population-based PD registry and utilize pilot registry data to explore trends in PD prevalence, patterns of care, possible relationship to the distribution of environmental toxicants, stakeholder priorities and cost efficiency of operations. This project is linked with a USAMRMC-funded project based at UCLA (Award Number W81XWH-07-1-0005, Principal Investigator: Beate Ritz), under which case ascertainment in Southern California and exploratory analyses are being performed.

The initial phase of this project has involved the establishment of a secure, high quality registry database, under the authority of the CDPH. The specific tasks related to this health surveillance activity were initiated in the first project year and have been advanced substantially in the second year. This initial project phase encountered significant delays, as detailed in the application for a second year no-cost extension, submitted and approved last month (copy of request and approval attached). With the ascertainment methods and database now well established, and a substantial number of cases registered, data analysis will now be conducted.

C. Key Accomplishments

1. Deputization status from the CDPH as designated agents for creation of a state registry: Zero-dollar contracts between CDPH and PI were developed, and signed in October, 2007.
2. Approval from Institutional Review Boards: Human subjects research waivers for the initial surveillance-oriented work were obtained from the Army Medical Research and Materiel Command Office of Research Protections Human Research Protection Office, the State of California Committee for the Protection of Human Subjects (CPHS), the Kaiser Permanente Northern California Institutional Review Board and the UCLA Office

for Protection of Research Subjects. CPHS has also authorized work to link registry data with Medicare data from the Center for Medicare and Medicaid Services (CMS), in order to evaluate the efficiency of the registry ascertainment methods utilizing capture-recapture analytic methods. A joint TPI-UCLA application to conduct exploratory analyses (evaluating diagnostic validity, linkage to toxicant databases, defining patterns of PD care) has been submitted to CPHS.

3. Notification of case reporting sources and professional organizations of registry implementation, as required by the California Parkinson's Disease Registry Act: A formal notification letter was developed in conjunction with CDPH, and mailed on January 2008 to the state Medical Board and the Board of Pharmacy, professional organizations representing potential case reporting sources (pharmacists, physicians and health care facilities) and public health officers in the project target counties. Inquiries from reporting sources/organizations about the registry have been addressed via email, telephone and in public and scientific gatherings.

4. Conduct outreach to stakeholders: A public stakeholders' meeting was convened in March, 2006. A free-standing website (www.capdregistry.org) and email box were created and launched in March, 2008. Requests for information about the registry from patients, colleagues and the public have consistently been answered within several days of receipt. A public fact sheet and informational brochure were developed and have been utilized in mailings and at patient-oriented events.

5. Convene a Stakeholders' Advisory Committee: Under the direction of its leaders, Mr. Greg Wasson, Ms. Anne Wasson and Mr. Mark Siegel, a committee is acting to create a forum and network in which registry stakeholders can be informed of project activities, provide valuable input to the project and strategize about future funding and expansion opportunities for the registry. In addition, two new members, Dr. James Wong and Dr. Ronald Kobayashi have joined the committee.

6. Define case ascertainment strategies: Investigators at the PI and UCLA initiated case ascertainment activities by approaching physician offices (neurology practices in particular), medical groups and large health care facilities, to enhance the willingness of these high-yield sources to cooperate with the reporting requirements.

7. Creation of tools and instruments for data collection: A data collection form and Microsoft Access database was developed and pilot-tested by staff (both physicians and non-physicians) at the PI. The form includes fields for obtaining information on basic demographics, key clinical parameters and characterization of data collection feasibility.

8. Establishment of a secure registry database: A secure, non-networked data repository was established in a dedicated room with access limited to trained project personnel.

9. Develop policies and procedures for ensuring data confidentiality, quality and appropriate use: Policies and procedures have been developed, together with staff training materials. TPI and UCLA project employees have attended group training sessions in September and October, 2008 and again in June and July of 2009. With the launch of field data collection in October, 2008, weekly conference calls have been held to keep all field staff updated on progress and the latest standard operating procedures on safe data collection/transmission and storage.

10. Hiring and training staff: Registry staff members have been hired and trained in communication with potential reporting sources, project security procedures, data collection and clinical abstraction.
11. Initiation of active case ascertainment and data collection in designated counties: The cumulative data collection accomplishments from October, 2008 through March 2010, are shown in the Reportable Outcomes section. The table shows the number of patients reported to us (prior to systematic de-duplication to identify unique cases). All reported cases have basic identifying and some demographic data available. Detailed clinical information has been collected directly from medical records on a subsample of cases for diagnosis validation purposes.
12. Activation of voluntary patient self registration: A mechanism for self registration has been established. Interested patients can print a registration form directly from the registry website (http://www.capdregistry.org/NewPatient.html).
13. Application for external validation data: Assessment of registry validity and ascertainment efficiency can be accomplished through linkage with external datasets listing Parkinson's disease cases. Applications have been filed for Medicare data with the University of Minnesota Research Data Assistance Center/CMS, and with the California Vital Statistics Advisory Committee/CPHS for death certificate data.
14. Assessment of surveillance efficiency: We have initiated collaborative planning with Dr. Lorene Nelson (Stanford University) for the capture-recapture analytic work to evaluate registry data collection efficiency. Planning discussions have also been initiated with staff at CDPH for linkage with state toxicant databases such as the California Pesticide Use Reports and Traffic Linkage Service (measures of air pollution).

D. Reportable Outcomes

Number of Reported Cases*, October 2008 - March 2010

	Northern California Ascertainment (TPI)	Southern California Ascertainment (UCLA)			
County	Santa Clara	Fresno	Kern	Tulare	**Total**
Total Population (Census)	1,764,499	909,153	800,458	426,276	3,900,386
Population >65 (Census)	192,330	90,006	72,041	40,922	395,299
Physicians Reporting	18	13	6	6	**43**
Medical Groups and Facilities Reporting	5	0	2	2	**9**
Total Patients Reported	**4949**	**1124**	**1249**	**368**	**7690**

***reported cases may contain duplicates**

E. Conclusions

Since our last annual progress report, most milestones in the project's primary specific aims, including developing methods for active ascertainment and registration of cases with PD and parkinsonism have been achieved. Establishment of the registry now enables us to transition our effort to addressing the exploratory aims of the project which will utilize the registry data. Important next steps for the project include the following:

1. Data cleaning and application of systematic de-duplication methods to ensure unique entries in registry database from multiple reporting sources
2. Diagnosis validation comparing source-reported cases with detailed clinical information abstracted from medical records
3. Compile and summarize demographic characteristics of reported cases
4. Carry out capture-recapture validation analysis using census, Medicare and California death certificate data
5. Finalize and implement projects analyzing patterns of PD prevalence and care, exploring possible associations between toxicant exposure and PD and undertaking a cost analysis of registry operation.
6. With Stakeholders' Advisory Committee, continue outreach and assess stakeholders' priorities for the registry.

F. References

None.

G. Appendices

1. Second year no cost extension request letter and approval (following pages)

The Parkinson's Institute

January 5, 2010

Dana Herndon
USAMRAA
820 Chandler Street
Fort Detrick, MD 21702-5014

Re: No Cost Extension Request- Award Number W81XWH-07-1-0261 "California Parkinson's Disease Registry Pilot Project – Coordination Center and Northern California Ascertainment"

Dear Ms. Herndon:

The Parkinson's Institute would like to request a second year no-cost extension concerning the above referenced grant (ending 2/28/2011).

As detailed in our first year no cost extension request (submitted 2/10/09), we have consistently encountered unexpected regulatory requirements in this project, and our work has been significantly delayed as a result.

The project has made considerable progress since active case ascertainment began about one year ago. To date we have identified nearly 5,700 PD cases in the four pilot counties in California and active ascertainment is still ongoing. Because data from two large providers is expected in 2010, we will likely identify significantly more cases than we had initially projected, highlighting the importance of this population-based registry work.

The next steps in the project are implementing systematic de-duplication procedures to ensure unique entries, validating registry content (i.e. confirmation of diagnosis and other qualifying criteria) and evaluating the completeness of registry data using census and Medicare data. We are currently waiting for clearance to access Medicare data for this analysis; once this approval is obtained we anticipate waiting an additional 3 or 4 months before receiving the data. Analysis will not be possible until the Medicare data files are received.

Additional aims of the project that we will address when we have completed case ascertainment include assessing differences in PD prevalence and patterns of care across different groups, exploring possible associations between toxicant exposure and PD patterns utilizing State of California hazardous substances databases and assessing the efficiency of data collection approaches. These will be the first population-based data of this type for PD in the US.

675 Almanor Avenue, Sunnyvale, CA 94085 408.734.2800 www.thepi.org

(continued on next page)

The Parkinson's Institute

Thank you for your support and consideration of this request. We are hopeful that we will be able to obtain a no cost extension in order to be able to complete this very important work. If you have any questions regarding this matter, please contact Julia Mayo at (408) 542-5650 or by email at jmayo@thepi.org.

Sincerely,

Caroline M. Tanner, MD PhD
Principal Investigator

Randy Soares
Vice President of Finance

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. CONTRACT ID CODE	PAGE OF PAGES
S	1 2

2. AMENDMENT/MODIFICATION NO.	3. EFFECTIVE DATE	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO.(If applicable)
P00003	04-Feb-2010	SEE SCHEDULE	

6. ISSUED BY	CODE	7. ADMINISTERED BY (If other than item 6)	CODE
USA MED RESEARCH ACQ ACTIVITY 820 CHANDLER ST FORT DETRICK MD 21702-5014	W81XWH	See Item 6	

8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code)		9A. AMENDMENT OF SOLICITATION NO.
THE PARKINSONS INSTITUTE 1170 MORSE AVENUE SUNNYVALE CA 94089-1605		9B. DATED (SEE ITEM 11)
	X	10A. MOD. OF CONTRACT/ORDER NO. W81XWH-07-1-0261
CODE 1VUD0 FACILITY CODE	X	10B. DATED (SEE ITEM 13) 01-Mar-2007

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☐ The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer ☐ is extended, ☐ is not extended.

Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)

13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

☐ A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.

☐ B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).

☐ C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:

X D. OTHER (Specify type of modification and authority)
Mutual Agreement - See Recipient's ltr dtd 1/5/10 & approved by GOR on 1/8/10

E. IMPORTANT: Contractor ☒ is not, ☐ is required to sign this document and return _____ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)
Modification Control Number: mharman102518

1. The period of performance for this grant is hereby extended through 31 March 2011 (research shall end 28 February 2011.)

2. See attached Summary of Changes.

3. This is a no cost modification. The total Grant amount and all other terms and conditions remain unchanged.

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) AARON J. WADE / ACCOUNT MANAGER TEL: 301-619-8397 EMAIL: aaron.wade@amedd.army.mil	
15B. CONTRACTOR/OFFEROR _____ (Signature of person authorized to sign)	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA BY Aaron J. Wade (Signature of Contracting Officer)	16C. DATE SIGNED 05-Feb-2010

EXCEPTION TO SF 30
APPROVED BY OIRM 11-84

30-105-04

STANDARD FORM 30 (Rev. 10-83)
Prescribed by GSA

(continued on next page)

SECTION SF 30 BLOCK 14 CONTINUATION PAGE

SUMMARY OF CHANGES

SECTION 00010 - SOLICITATION CONTRACT FORM

DELIVERIES AND PERFORMANCE

The following Delivery Schedule item for CLIN 0001 has been changed from:

DELIVERY DATE	QUANTITY	SHIP TO ADDRESS	UIC
POP 01-MAR-2007 TO 31-MAR-2010	N/A	USA MED RESEARCH AND MATERIEL COM JUANITA LIVINGSTON 504 SCOTT STREET FORT DETRICK MD 21702-5012 FOB: Destination	W23RYX

To:

DELIVERY DATE	QUANTITY	SHIP TO ADDRESS	UIC
POP 01-MAR-2007 TO 31-MAR-2011	N/A	USA MED RESEARCH AND MATERIEL COM JUANITA LIVINGSTON 504 SCOTT STREET FORT DETRICK MD 21702-5012 FOB: Destination	W23RYX

(End of Summary of Changes)